CURB AND GUTTER

BACKFILL AND COMPACT BACKFILL AND COMPACT AROUND NEW PULL (SPLICE) BOX COVER AT AROUND NEW PULL (SPLICE) BOX CONCRETE PAVEMENT GRADE LEVEL *1" BELOW GRADE PULL SPLICE PULL SPLICE BASE COURSE HOME - RUN HOME - RUN CONDUIT CONDUIT **SECTION A - A SECTION B - B**

* RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

NO CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL

3'- 0" OR AS 3'- 0" OR AS SHOWN ON THE SHOWN ON THE PLAN SHEET PLAN SHEET PLACE LOOP IN CENTER OF LANE(S) PLACE LOOP IN CENTER OF LANE(S) 1" PVC CONDUIT 1" PVC CONDUIT HOME RUN HOME RUN CONDUIT 45° ELBOW 45° ELBOW OR BEND OR BEND CONDUIT CONDUIT 90° ELBOW 90° ELBOW OR BEND OR BEND 6' OR AS SHOWN CONDUIT CONDUIT 6' OR AS SHOWN ON PLANSHEET ON PLANSHEET PULL (SPLICE) (SPLICE) 3'- 0" MAX. OR AS SHOWN 3'- 0" MAX. OR AS SHOWN ON THE PLAN SHEET ON THE PLAN SHEET

TYPICAL PLAN LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE IN THE ROADSIDE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED. CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND REFORE NEW PAYEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER

IN BASE COURSE WITH
PULL (SPLICE) BOX OFF
ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE

2014 /S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

SDD 09F15

SDD 09F15 - 04

Version 4

Standard Detail Drawing 9F15 (sheet a)

September 19, 2014

Loop Detector Installed in Base Course with Pull (Splice) Box Off Roadway (Option 1)

References:

FDM15-5 Attachment 30.5 and 30.6 for conventional symbols

Standard Spec. 655 Electrical Wiring

Standard Spec. 675 Controllers and Detectors

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	<u>UNIT</u>
652.0800	Conduit Loop Detector	LF
653.0100 - 0150	Pull Boxes Steel (inch)	EACH
653.0151 - 0179	Pull Boxes Non-Conductive (inch)	EACH
655.0700	Loop Detector Lead In Cable	LF
655.0800	Loop Detector Wire	LF

Standardized Special Provisions associated with this drawing:

STSP NUMBER TITLE

NONE

Other SDDs associated with this drawing:

SDD 9B2 Conduit SDD 9B4 Pull Box

SDD 9B16 Pull Box Non-Conductive

Design Notes:

NONE

Contact Person:

Ahmet Demirbilek (414) 220-6801

(414) 322-9606 (Mobile)

CURB AND GUTTER

BACKFILL AND COMPACT BACKFILL AND COMPACT AROUND NEW PULL (SPLICE) BOX COVER AT AROUND NEW PULL (SPLICE) BOX CONCRETE PAVEMENT **GRADE LEVEL** *1" BELOW GRADE SPLICE PULL BOX SPLICE BOX BASE COURSE HOME - RUN HOME - RUN CONDUIT CONDUIT **SECTION A - A SECTION B - B**

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL

NO CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

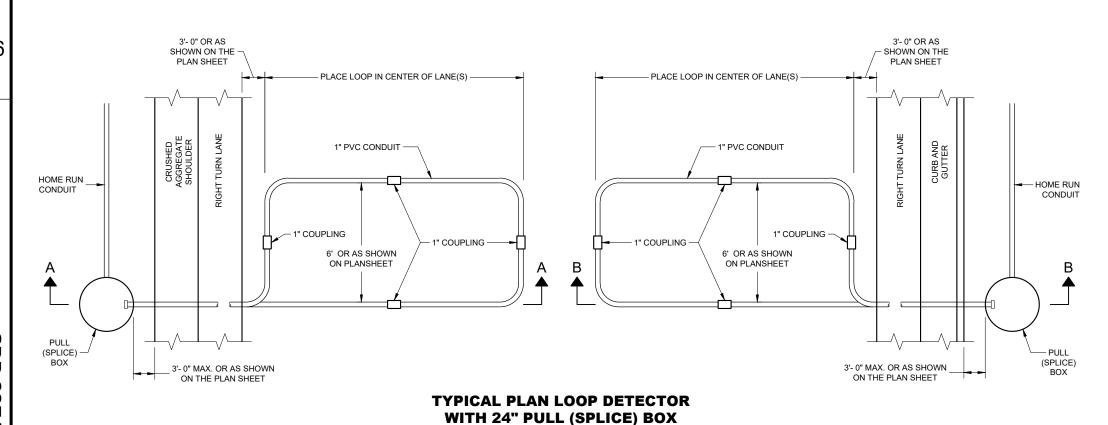
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED. CONTINUOUS LENGTH

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER



MULTI-LANE

INSTALLATION

IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

September 2014 /S/ Ahmet Demirbilek

DATE STATE ELECTRICAL ENGINEER

SDD 09F15 - 04k

SDD 09F15 - 04b

Version 4

Standard Detail Drawing 9F15 (sheet b)

September 19, 2014

Loop Detector Installed in Base Course with Pull (Splice) Box Off Roadway (Option 2)

References:

FDM15-5 Attachment 30.5 and 30.6 for conventional symbols

Standard Spec. 655 Electrical Wiring

Standard Spec. 675 Controllers and Detectors

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	<u>UNIT</u>
652.0800	Conduit Loop Detector	LF
653.0100 - 0150	Pull Boxes Steel (inch)	
653.0151 - 0179	Pull Boxes Non-Conductive (inch)	EACH
655.0700	Loop Detector Lead In Cable	LF
655.0800	Loop Detector Wire	LF

Standardized Special Provisions associated with this drawing:

STSP NUMBER TITLE

NONE

Other SDDs associated with this drawing:

SDD 9B2 Conduit SDD 9B4 Pull Box

SDD 9B16 Pull Box Non-Conductive

Design Notes:

NONE

Contact Person:

Ahmet Demirbilek (414) 220-6801

(414) 322-9606 (Mobile)